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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,374	09/23/2003	Ayumu Oda	4492-0108P	9210

2292 7590 06/13/2005

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EXAMINER

HINZE, LEO T

ART UNIT	PAPER NUMBER
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2854

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/667,374	Applicant(s) ODA ET AL.	
	Examiner Leo T. Hinze	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 2, 5 and 7-10 is/are allowed.
- 6) ☒ Claim(s) 3 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochimaru et al., US 4,703,334 (Mochimaru) in view of Uchiyama et al., US 6,278,471 (Uchiyama).

a. Regarding claim 3:

Mochimaru teaches an optical writing device comprising: a writing head (70, Fig. 12) including a plurality of light emitting portions (67, Fig. 11) aligned in an array (col. 7, lines 62-

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63) for irradiating an exposure object with light. the writing head having opposite first and second ends; a first support member (86, Fig. 12) supporting the first end of the writing head; a second support member (87, Fig. 12) supporting the second end of the writing head; and a connecting member (92, Fig. 12) interconnecting the first support member and the second support member while maintaining a positional relationship between the first support member and the second support member; the connecting member having a configuration which is more easily deformable than any one of the first support member, the second support member and the writing head. In Fig. 12, it appears that item 69 has a higher bending moment of inertia due to the multiple ribs 83, 84 than member 92, which appear to be slender with few features to increase their bending moment of inertia.

Mochimaru does not teach wherein the writing head is supported movably by the first support member, the second support member, and the connecting member.

Uchiyama teaches that it is advantageous to make parts of the optical writing device movable with respect to each other. The writing head 227a, Fig. 8, moves with respect to its support 300, Fig. 8. Uchiyama teaches that this relative movement is advantageous to allow for thermal expansion of components that may be made from different materials and to prevent image distortion (col. 3, l. 52 through col. 4, l. 23).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Mochimaru such that the writing head is supported movably by the support members, because Uchiyama teaches that it is advantageous to make parts of the

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optical writing device movable with respect to each other to allow for thermal expansion of components that may be made from different materials and to prevent image distortion.

b. Regarding claim 6:

The combination of Mochimaru and Uchiyama teaches all that is claimed as discussed in the rejection of claim 3 above. Mochimaru also teaches that the connecting member is formed of a thin metal sheet (col. 9, lines 20-25). Mochimaru is silent as to the material of construction of the first and second support members.

Mochimaru does not teach the first and second support members being made from a resin.

Uchiyama teaches an image forming apparatus with an LED exposure head that uses resin for various parts of the head because resin reduces the overall weight of the head (col. 7, lines 24-26).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Mochimaru to use resin to construct the first and second supports, because Uchiyama teaches that resin helps reduce the weight of components.

Response to Arguments

3. Applicant's arguments with respect to claims 3 and 6 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

4. Claims 1, 2, 5 and 7-10 are allowed.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

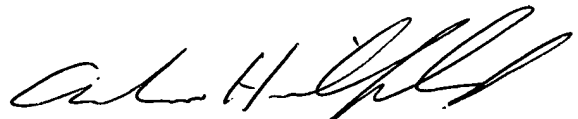
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo T. Hinze whose telephone number is (571) 272-2167. The examiner can normally be reached on M-F 8:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leo T. Hinze
Patent Examiner
AU 2854
07 June 2005



ANDREW H. HIRSHFELD
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